

Amendments to the Specification:

Please replace the paragraph beginning at page 9, line 28 with the following amended paragraph:

Fig. 3 shows a digital symbol sequence of a probing signal (sequence a) transmitted by the first subscriber terminal 1 (Modem 1) according to a second embodiment of the invention and various cases of received signals (~~sequences b through g~~ sequences b through f). Fig. 3 shows a frame structure of...

Please replace the paragraph beginning at page 10, line 9 with the following amended paragraph:

Sequence (b) of Fig. 2 shows the signal received by subscriber terminal 8 (Modem 2) in the case of an all-digital, fully transparent connection. Thus, the frame sent by modem 1 is received by modem 2 with identical symbols, merely displaced in time. This case allows to establish a PCM transmission scheme between modem 1 and modem 2. Sequences (b) ~~through (g)~~ through (f) show received signals in the presence...

Please delete the paragraph beginning at page 4, line 15, which starts with "This object is achieved by...".

Please add the following new abstract:

A method of determining properties of a signal transmission channel in a telephone network that connects a first subscriber end point to a second subscriber endpoint by a signal transmission channel having a digital channel portion is disclosed. The method can include sending a digital probing signal from a first subscriber terminal to a second subscriber terminal. The method

can also include receiving, at the second subscriber terminal, a received signal resulting from having transmitted the digital probing signal through the signal transmission channel and comparing the received signal with the digital probing signal to distinguish between possible channel configurations of the signal transmission channel. The method can also include transmitting a response signal from the second subscriber terminal to the first subscriber terminal.